

# INFORMATION ASSURANCE AND CYBERSECURITY (AAS)

**Award:** Associate of Applied Science Degree

**No. of credits required:** 60

**For more information:** Contact Business & Applied Technology at [bat@harford.edu](mailto:bat@harford.edu); or Admissions, 443-412-2109.

## Program Description

This degree program prepares students to enter the high-demand field of information technology security. With the increase of viruses and other security breaches, companies need professionals who can protect their data and equipment from internal and external security threats. Students in this program gain hands-on experience with the latest hardware and software and learn to implement appropriate security policies and procedures. Students planning to transfer should select electives according to the requirements of the receiving institution.

## Program Goals

Upon successful completion of this program of study students will be able to:

1. Apply software patches to operating systems and applications
2. Assess a computer system's security vulnerabilities using appropriate resources
3. Use standard software tools to detect attempted security breaches of computer systems
4. Implement computer network security defenses
5. Sit for CCNA (Cisco Certified Network Administrator) certificate examinations if desired

## Employment Information

According to the *Occupational Outlook Handbook*, computer security specialists plan, coordinate, and maintain an organization's information security. These workers educate users about computer security, install security software, monitor networks for security breaches, respond to cyber attacks, and, in some cases, gather data and evidence to be used in prosecuting cyber crime. The responsibilities of computer security specialists have increased in recent years as cyber attacks have become more sophisticated. Employment is expected to grow much faster than the average, and job prospects should be excellent. Overall employment may increase by as much as 31% by 2029. Demand for information security analysts is expected to be very high. Cyberattacks have grown in frequency, and analysts will be needed to come up with innovative solutions to prevent hackers from stealing critical information or creating problems for computer networks.

## Degree Requirements

### Recommended Course Sequence

| First Semester |   | Credits |
|----------------|---|---------|
| CIS 102        | Introduction to Information Sciences (GI) | 3       |
| ENG 101        | English Composition (GE)                  | 3       |
| ISS 105        | Intro to Cybersecurity (GI)               | 3       |
| PHIL 221       | Business Ethics (GAH)                     | 3       |

|   |   |
|---|---|
| Mathematics Elective (GM) ( <a href="https://catalog.harford.edu/general-education/#mathematics">https://catalog.harford.edu/general-education/#mathematics</a> ) | 3 |
|---|---|

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**Credits** **15**

#### Second Semester

|   |                                    |   |
|---|------------------------------------|---|
| CIS 104   | Computer Operating Systems         | 3 |
| CIS 211   | MS Windows Server Operating System | 3 |
| CIS 135   | Introduction to Networks           | 3 |
| Biological/Physical Lab Science Elective (GL) ( <a href="https://catalog.harford.edu/general-education/#biological-physical-laboratory-science">https://catalog.harford.edu/general-education/#biological-physical-laboratory-science</a> ) | 4                                  |   |
| Behavioral/Social Science Elective (GB) (D)   | 3                                  |   |

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**Credits** **16**

#### Third Semester

|                             |                                   |   |
|-----------------------------|-----------------------------------|---|
| CIS 210                     | Fundamentals of Network Security  | 3 |
| ISS 111                     | Cisco 1                           | 4 |
| ISS 112                     | Cisco 2                           | 4 |
| ISS 220                     | Strategic Infrastructure Security | 3 |
| Physical Education Elective | 1                                 |   |

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**Credits** **15**

#### Fourth Semester

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|------------------------------|-----------------------------------|---|
| ISS 221                      | Network Defense & Countermeasures | 3 |
| ISS 222                      | Computer Forensics                | 3 |
| ISS 213                      | Cisco 3                           | 4 |
| Select one of the following: | 4                                 |   |

|         |   |  |
|---------|---|--|
| CIS 274 | Cooperative Education: Computer Information Systems |  |
| CIS 134 | Fundamentals of Cloud Administration                |  |
| CIS 110 | Introduction to UNIX/Linux                          |  |
| ISS 212 | Cisco Cybersecurity Operations                      |  |

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**Credits** **14**

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**Total Credits** **60**

## General Education Degree Requirements

Note: The following codes identify courses which satisfy the General Education Degree Requirements:

Behavioral/Social Science (GB)  
 English Composition (GE)  
 Arts/Humanities (GAH)  
 Interdisciplinary and Emerging Issues (GI)  
 Biological/Physical Laboratory Science (GL)  
 Mathematics (GM)  
 Biological/Physical Science (GS)